



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

October 15, 2007

Docket No. 99990001
EA-07-235

General Licensee

Stephen E. Johnson
Maintenance/Engineering Manager
MeadWestvaco Virginia Corporation
104 East Riverside Avenue
Covington, VA 24426-0950

**SUBJECT: INSPECTION 99990001/2007015, MEADWESTVACO VIRGINIA
CORPORATION, COVINGTON, VIRGINIA SITE**

Dear Mr. Johnson:

On June 15, 2007, Randolph Ragland and Richard Ladun of this office conducted a safety inspection at the above address of activities authorized by General License. The inspection was limited to a review of the June 5, 2007, NRC Operations Center Event Report No. 43406, involving the loss of two tritium exit signs. Additional information provided in your correspondence dated June 28, 2007, was also reviewed as part of this inspection. The initial findings of the inspection were discussed with David R. White, Electrical, Instrument, and Process Control Superintendent, and with Raymond E. Hundley, Radiation Safety Officer, on June 15, 2007. Final inspection findings were communicated by telephone to Mr. Hundley on October 3, 2007. The enclosed report presents the results of this inspection.

Based on the results of this inspection, one apparent violation was identified and was considered for escalated enforcement in accordance with NRC Enforcement Policy. Contrary to 10 CFR 31.5(c)(8)(i), MeadWestvaco Virginia Corporation (MWV) failed to properly transfer or dispose of two exit signs containing Tritium by export, by transfer to another authorized general licensee, or to a person authorized to receive the devices by a specific license, or that authorizes waste collection. Specifically, between April 2002 and June 2007, MWV lost accountability of two SRB Technologies, Model B100-u20 tritium exit signs, containing approximately 7.4 and 8.3 curies of tritium, and MWV believes the signs were likely disposed of in an onsite landfill. This violation is of concern to the NRC because the failure to control devices containing radioactive material could result in the loss or theft of the material and cause unintended radiation doses to members of the public. However, the potential hazard caused by the disposal of these signs is low; therefore, this violation is categorized at Severity Level IV in accordance with the NRC Enforcement Policy.

After consultation with the Director, Office of Enforcement, I have been authorized to exercise enforcement discretion and not issue a violation in this case in accordance with the exercise of enforcement discretion process in Section VII.B.6 of the Enforcement Policy. In making this decision, the NRC took into consideration that as a general licensee: (1) your actions were not willful; (2) you identified the violation and reported the violation to the NRC as required; and (3) you took appropriate corrective action to address the specific violation and prevent recurrence of similar problems.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible at <http://www.nrc.gov/reading-rm/adams.html>.

For additional information, current NRC regulations are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Medical, Academic, and Industrial Uses of Nuclear Material**; then **Regulations, Guidance, and Communications**. The current Enforcement Policy is available at www.nrc.gov; select **Site Map**; then scroll down to **Enforcement Policy**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 7:00 a.m. to 8:00 p.m. EST, Monday through Friday (except Federal holidays).

In you have any questions concerning this matter, please contact Marie Miller, Chief, Materials Security and Industrial Branch, at 610-337-5205 or Mr. Ragland at 610-337-5083.

Sincerely,

/RA/

Brian E. Holian, Director
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 99990001/2007015

cc:
Raymond Hundley, Radiation Safety Officer
Commonwealth of Virginia

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Sincerely,

/RA/

Brian E. Holian, Director
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 99990001/2007015

cc:
Raymond Hundley, Radiation Safety Officer
Commonwealth of Virginia

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DATE	10/11/07		10/11/07	10/15/07		

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 99990001/2007015
Docket No. 99990001
License No. General Licensee
Licensee: MeadWestvaco Virginia Corporation
Location: 104 East Riverside Avenue
Covington, VA 24426-0950
Inspection Dates: June 15, 2007 - October 3, 2007
Date Followup
Information Received: July 3, 2007

Inspectors:	<i>/RA/</i>	10/11/07
	_____ Randolph C. Ragland, Jr. Senior Health Physicist	_____ date
	<i>/RA R. C. Ragland for/</i>	10/11/07
	_____ Richard Ladun Health Physicist	_____ date
Approved By:	<i>/RA/</i>	10/11/07
	_____ Marie Miller, Chief Materials Security and Industrial Branch Division of Nuclear Materials Safety	_____ date

EXECUTIVE SUMMARY

MeadWestvaco Virginia Corporation
NRC Inspection Report No. 99990001/2007001

On June 5, 2007, MeadWestvaco (MWV) Virginia Corporation notified the NRC Operations Center (Event Report No. 43406) that they had lost accountability of three Tritium exit signs.

By letter dated June 28, 2007, MWV provided NRC a 30-day report that provided details of their investigation into the loss of accountability of the sources; their conclusion that actually only two sources had been lost rather than three; that the sources were most likely improperly disposed of in an onsite landfill; and that potential radiation exposures to the public, if the two signs were improperly disposed of in the onsite landfill, would be minimal.

Corrective actions included the removal and transfer of all remaining generally licensed Tritium exit signs to a manufacturer for proper disposal, and increased awareness by the Radiation Safety Officer regarding management oversight and control of generally licensed sources.

The failure to properly transfer or dispose of devices containing byproduct material (i.e., two exit signs containing Tritium) by export, by transfer to another authorized general licensee, or to a person authorized to receive the devices by a specific license, or that authorizes waste collection, represents an apparent violation of 10 CFR 31.5(c)(8)(i).

REPORT DETAILS

I. Organization and Scope and Management Oversight of the Program

a. Inspection Scope

The inspector reviewed the organization and scope and management oversight of licensed activities. Information was gathered through review of documents, direct inspection, and interviews with cognizant personnel.

b. Observations and Findings

MeadWestvaco (MWV) Virginia Corporation operates a large paper mill located in Covington, Virginia. MWV is licensed to possess and use multiple fixed gauges under NRC License No. 45-01568-01, and under 10 CFR 31.5, MWV is generally licensed to possess byproduct material (tritium) for use in industrial exit signs.

Mr. Raymond Hundley acts as the facility Radiation Safety Officer (RSO), and is responsible for primary oversight of the tritium exit signs, maintaining the inventory of tritium exit signs, and routine compliance with the conditions of the general license. Mr. Hundley reports to Mr. David White, Electrical, Instrument, and Process Control Superintendent; Mr. White reports to Mr. Steve Johnson, the Maintenance/Engineering Manager; and Mr. Johnson reports to Mr. Mark George, Plant Manager.

c. Conclusions

No violations for safety concerns were identified.

II. Material Receipt, Use, Transfer, and Control

a. Inspection Scope

A review was performed of the events and details associated with NRC Operations Center Event Report No. 43406, involving MWV's loss of accountability of three tritium exit signs. Information was gathered by a review of documents, interviews with cognizant personnel, and through direct inspection. Specifically, the inspectors reviewed inventory records, conducted plant walkdowns, inspected source storage areas, interviewed the RSO, interviewed security personnel, and verified that an article offering a reward for information leading to the recovery of the source was published in the company newspaper.

b. Observations and Findings

On June 5, 2007, Mr. Raymond Hundley, RSO, MWV, contacted the NRC Operations Center and reported that MWV could not account for three generally licensed tritium exit signs containing between 7.8 and 8.6 curies each, and that these signs were likely improperly disposed of in an onsite landfill.

The RSO explained that MWV was performing a site hazard reduction project which included replacing all tritium exit signs with electronically illuminated exit signs and sending all of the tritium signs back to the primary manufacturer (SRB Technologies, Inc.) for proper disposal. During retrieval of the tritium exit signs, only 136 of the 139 tritium exit signs listed in inventory records could be located; therefore, three tritium exit signs were unaccounted for.

On June 6, 2007, Mr. Michael Reichard, NRC Region I, contacted Mr. Hundley and pointed out that one of the serial numbers for one of the reported unaccounted for tritium exit signs (serial number 595785) was not listed in NRC's data base, but that 545785 was listed in NRC's data base. Mr. Hundley then contacted Mr. Ralph Williams of SRB Technologies, the supplier of the tritium exit signs, and asked him to review historical records for the three missing exit signs. On June 7, 2007, Mr. Williams reported, by electronic mail to Mr. Hundley, that 595785 was not a valid serial number, but a sign with serial number 545785 had been shipped to MWV on 3/19/1993. Based on that information, Mr. Hundley concluded that the MWV inventory contained a typographical error and that the exit sign with serial number 595785 that was reported missing to NRC on June 5, 2007, was never owned or possessed by MWV. Based on that information, Mr. Hundley concluded that only two signs were unaccounted for.

On June 15, 2007, NRC conducted an onsite inspection to review MWV's investigation of the unaccounted for signs. The RSO reported that he had initiated a thorough investigation into the whereabouts of the unaccounted for signs. He stated that the signs could have either been stolen, could still be located somewhere in the plant, or could have been improperly disposed of. His investigation included a review of inventory records; discussions with SRB Technologies, the primary supplier of their tritium exit signs; direct inspection of plant areas and potential storage locations; interviews with security staff; a review of historical plant drawings; reviews of maintenance records; and interviews with cognizant maintenance staff. In addition, he published an article in the plant newspaper, notifying plant workers that a \$100.00 reward would be paid to the first person to locate a missing Tritium exit sign in the plant.

The RSO reported that a "theft scenario" was not likely, because plant workers must pass through a security checkpoint prior to exiting the industrial site and that all personnel exiting the site are subject to random inspections. The RSO also explained that the "unaccounted for storage scenario" was not considered likely, because all likely storage areas had been searched and that the signs were also not recovered as a result of the offer of a \$100.00 reward for the recovery of the signs. The RSO stated that MWV management had concluded that the signs were most likely improperly disposed of in one of several onsite permitted landfills, because all non-recyclable construction debris at the plant is routinely disposed of in this manner.

By letter dated June 28, 2007, MWV submitted to NRC a 30-day written report following the loss of licensed material. The report outlined MWV's investigation efforts and assessment of potential personnel and public exposures. The two signs contained an estimated 7.4 and 8.3 curies of gaseous radioactive Tritium. Radiation levels on the outside of an intact sign are essentially zero.

MWV determined that theoretically, if the signs were crushed in the immediate presence of a plant worker and tritium gas escapes, a plant worker could receive internal contamination. However, a release of Tritium gas in the industrial environment would quickly be reduced by process exhausts and dilution ventilation. If the devices were disposed of in the landfill and remained intact, exposures to the public would essentially be zero. If the devices were disposed of in the landfill and Tritium is released into the landfill environment, tritium gas would either dissipate in air, or be converted to tritiated water which would be held up in the landfill and eventually released in leachate. Leachate from the landfill is collected, treated, and diluted in a water treatment facility that produces an effluent of approximately 32 million gallons per day. The combination of delay, decay, and dilution would reduce potential exposures to members of the public to negligible levels.

The RSO reported that corrective actions included the June 5, 2007, removal and transfer of all remaining generally licensed Tritium exit signs to SRB Technologies, Inc. for proper disposal, and increased awareness by the RSO regarding management oversight and control of generally licensed sources.

c. Conclusions

The inspectors concluded that MWV made reasonable efforts to recover the two missing Tritium exit signs, concurred with the licensee's evaluation that the exit signs were most likely improperly disposed of in an onsite landfill, and concluded that potential exposures to members of the public from improper disposal of the exit signs would likely be negligible.

The failure to properly transfer or dispose of devices containing byproduct material (i.e., two exit signs containing tritium) by export, by transfer to another authorized general licensee, or to a person authorized to receive the devices by a specific license, or that authorizes waste collection, represents a violation of 10 CFR 31.5(c)(8)(i).

III. Exit Meeting

Initial findings of the inspection were discussed with David R. White, Electrical, Instrument, and Process Control Superintendent, and with Raymond E. Hundley, RSO, on June 15, 2007. Final inspection findings were communicated by telephone to Mr. Hundley on October 3, 2007.